

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/50746

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G02B6/44 G01M3/04 G01K11/32

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02B G01M G01K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/038839 A (BAKER HUGHES INC) 8 May 2003 (2003-05-08) page 3, line 5 - line 22; figure 1	1
Y	-----	2,3,11, 15,21,22
X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 05, 31 May 1999 (1999-05-31) - & JP 11 038283 A (YAZAKI CORP), 12 February 1999 (1999-02-12) abstract; figure 1	1-3
Y	----- WO 01/84206 A (CORNING CABLE SYS LLC ; GIMBLET MICHAEL J (US); QUINN CHRIS M (US); MI) 8 November 2001 (2001-11-08) page 5, line 11 - page 7, line 14; figures 1,2 ----- -/--	1-3,11, 15,21,22

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the international search

11 November 2004

Date of mailing of the international search report

17 2 11. 2004

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INTERNATIONAL SEARCH REPORT

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PCT/EP 03/50746

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DAVID BENTLEY: "A Primer on How to Put Substrates Together" PAPER, FILM AND FOIL CONVERTES MAGAZINE, vol. 1, March 2001 (2001-03), XP002285423 the whole document	11,15
Y	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 03, 27 February 1998 (1998-02-27) & JP 9 306254 A (TOSHIBA CORP), 28 November 1997 (1997-11-28) abstract	1-3,11, 15,21,22
Y	VOGEL B ET AL: "LEAKAGE DETECTION SYSTEMS BY USING DISTRIBUTED FIBER OPTICAL TEMPERATURE MEASUREMENT" PROCEEDINGS OF THE SPIE, SPIE, BELLINGHAM, VA, US, vol. 4328, 5 March 2001 (2001-03-05), pages 23-34, XP008004114 ISSN: 0277-786X page 29, paragraph 1 - page 31, paragraph 1; figures 6,7	1-3,11, 15,21,22
X	EP 0 978 715 A (GESO GES FUER SENSORIK GEOTECH) 9 February 2000 (2000-02-09) cited in the application column 9, line 58 - column 10, line 47; figure 1	1

INTERNATIONAL SEARCH REPORT

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PCT/EP 03/50746

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-3, 11, 15, 21, 22

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3,11,15,21,22

Subject 1 relates to an optical cable with telecommunication fibres in the core and sensor fibre enclosed within the outer jacket whereby the optical fibres are located adjacent reinforcing rods defining a bending plane of the cable.

2. claims: 4,5

Subject 2 relates to an optical cable with telecommunication fibres in the core and sensor fibre enclosed within the outer cable jacket whereby the sensor fibres are stranded around the cable core.

3. claims: 6,7

Subject 3 relates to an optical cable with telecommunication fibres in the core and sensor fibre enclosed within the outer jacket, whereby the sensor fibre comprise a tight buffer configuration.

4. claims: 8-10

Subject 4 relates to an optical cable with telecommunication fibres in the core and sensor fibre enclosed within the outer jacket whereby the sensor fibre(s) are loosely buffered in enclosing tubes.

5. claims: 12-14,19,20

Subject 5 relates to an optical cable with telecommunication fibres in the core and sensor fibres enclosed within the outer jacket, and to a gas tight barrier or metal barrier enclosing the cable core.

6. claims: 16-18

Subject 6 relates to an optical cable with telecommunication fibres in the core and sensor fibre enclosed within the outer jacket, and to the inner structure of the cable core.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/50746

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03038839	A	08-05-2003	WO 03038839 A1 US 2003081917 A1	08-05-2003 01-05-2003
JP 11038283	A	12-02-1999	JP 3224762 B2	05-11-2001
WO 0184206	A	08-11-2001	AU 5586301 A WO 0184206 A2	12-11-2001 08-11-2001
JP 9306254	A	28-11-1997	NONE	
EP 0978715	A	09-02-2000	DE 19844753 A1 AT 235679 T DE 59904696 D1 EP 0978715 A1	10-02-2000 15-04-2003 30-04-2003 09-02-2000